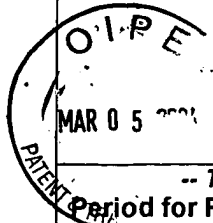


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 CAU 3746-

	Application No. 10/090,260 Examiner Ehud Gartenberg	Applicant(s) CAHILL, BRET EDWARD Art Unit 3746
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Office Action Summary
 -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Entry abandoned
EB 5/13/04

Status

- 1) ☒ Responsive to communication(s) filed on papers filed through 1/21/2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 16-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

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Application Papers

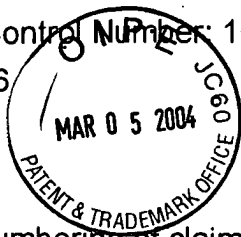
- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 March 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
 If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
- 1. ☐ Certified copies of the priority documents have been received.
 - 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____
5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
6) <input type="checkbox"/> Other: _____ |
|---|---|



Specification

1. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 1-15 submitted by fax 9/18/2002 have been renumbered 16-30. As understood, the intent of said pre-amendment was to cancel the originally submitted claims and to file new claims. In his response, Applicant is required to confirm that the original claims are indeed canceled, and that the only claims standing in the case are those filed in said fax transmission.

2. The disclosure is objected to because of the following informalities:

i) Figures 1, 2, and 3 are missing;

ii) Figure 4, the only figure in the case is not listed in the BRIEF DESCRIPTION OF THE DRAWINGS.

iii) The DETAILED DESCRIPTION OF THE INVENTION lacks any numerals that read on and describe Figure 4, the only figure in the case. The Examiner took notice of the comment regarding the numerals in Fig. 4 and their correspondence to the numerals of Fig. 1 (numeral of Fig. 1 + 100 = numeral of Fig. 4), however, the following numerals are still not taught: 112, 106, 104. All numerals in a drawing must be disclosed and explained in the disclosure. If Applicant intends to keep Fig. 4 as the only figure in the application, he needs to amend the disclosure accordingly, and to re-number Fig. 4 as

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Fig. 1. HOWEVER, IN THIS CASE APPLICANT IS REQUESTED TO SUBMIT FOR INSPECTION THE ORIGINAL FIGURES 1, 2, 3, IN ORDER TO VERIFY THAT FIGURE 4 DOES NOT CONTAIN NEW MATTER.

Appropriate correction is required. For instructions of the fashion of submitting amendments, Applicant is directed 37 CFR 1.121.

3. Claims 22 and 23 (previous 7 and 8) are objected to because of the following informalities: the claims cannot simultaneously depend on two claims; the dependence must be in the alternative. A multiple dependent claim cannot depend on another multiple dependent claim. Appropriate correction is required.

4. The condition of the disclosure does not permit application of prior art. However, to the extent that the disclosure could be understood, a search was performed, and the following references were considered to be relevant: Goddard 2544418, Chamis 6393831.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 16-30 are provisionally rejected under 35 U.S.C. 103(a) as being unpatentable over Chamis 6393831, because to the extent that the claimed invention could be understood, it is an obvious modification of Chamis '831, that teaches the compressor 14 and the turbine 20,22 spinning within the drum 12, that reads on the

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presently claimed rotating pressure vessel and rotating external shell, said combination being energized by combustor 54, inside said drum 12.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ehud Gartenberg whose telephone number is 703/308-2634. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Justine Yu can be reached on 703/308-2675. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703/308-0861.



Ehud Gartenberg
Primary Examiner
Art Unit 3746

EG

Notice of References Cited

Application/Control No.

10/090,260

Applicant(s)/Patent Under
Reexamination
CAHILL, BRET EDWARD

Examiner

Ehud Gartenberg

Art Unit

3746

Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
	A	US-6,393,831	05-2002	Chamis et al.	60/269
	B	US-2,544,418	03-1951	Goddard	60/39.35
	C	US-			
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	RECEIVED
	V	MAR 1 1 2004
	W	TECHNOLOGY CENTER R3700
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.



Serial Number: 090260
PPA Filed: March 5, 2001
Application No. 10/090,260
Applicant: Cahill, Bret Edward
Appn. Title: External Rotor Gas Turbine
Examiner: Ehud Gartenberg

1303 E. University Blvd.
20833
Tucson, AZ 85719-0521

March 5, 2004

Asst. Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

Re: *Office Action of Nov. 5, 2003*

Dear Sir:

Please find enclosed:

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MAR 11 2004

TECHNOLOGY CENTER R3700

a copy of the Office Action of November 5, 2003
Petition for Extension of Time of one month
USPTO Credit Card Payment Form for \$55.00 (small entity)
a copy of the original PPA of March 5, 2001, App. No. 60/273426
Numbering to Fig. 4
Brief Description of Fig. 4
Amended Claims now designated 31 - 48
Claims Do Not Infringe on Prior Art

If anything is missing or needs to be explained, please call 520-325-9048

Yours,

Bret Cahill

ER980114074US



Claims Do Not Include Chamis Engine

The claims have only been changed to eliminate any informalities. It is clear from the abstract and drawings that the purely axial-annular flow Chamis engine Pat. No. 6393831 never anticipated the design or features of the NPA 10/090260 (PPA 60/273426 - radial flow turbine/centrifugal or axial flow compressor).

The Chamis engine is described as a "rotating drum" but since the forward and aft ends of the engine are completely open except for the annulus, it would be better described as a rotating pipe or cylinder mounted on a nonrotating or counter rotating inner pipe. The basic design in no way can be compared to the true pressure vessel of NPA 10/090260. The working fluid in the Chamis engine flows through an annulus. The radial flow NPA 10/090260 engine has no annulus.

Even from a mathematical point of view the basic shapes of two engines manage to fall into the two different shape categories in topology. The open ended Chamis engine is basically a "manifold" and NPA 10/090260 is a "sphere."

The Chamis engine was inspired by exoskeletal structures and motivated by higher inlet temperatures made possible with ceramic turbine blades thrown into compression by centrifugal force. NPA 10/090260 was motivated by the external cooling, design and fabrication advantages of eliminating turbine blades and blade tip clearances.

The bearings in the radial flow NPA 10/090260 engine are internal and inverted; The Chamis engine, truly an inside out design, is mounted on external bearings.

These are just a few of the differences. The engines are radically different concepts and no engineer can look at the drawings or abstract and come to a different conclusion. The Office Action of Nov. 5, 2003 does not provide any support to the contention that the claims in 10/090260 have been covered by another inventor.

March 5, 2004

Bret Cahill